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January 1941

## Test 372: International Tractor Model T-9 (Gasoline) (Wide Tread)

Tractor Museum

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UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT  
AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 372

Dates of test: May 27 to June 18, 1941

Name and model of tractor: INTERNATIONAL TRACTRACTOR (Wide Tread) T-9 (Gasoline)

Manufacturer: International Harvester Company, Chicago, Illinois

Manufacturer's rating: NOT RATED

B E L T H O R S E P O W E R T E S T S

Hp.	Crank- shaft Speed R.P.M.	Fuel Consumption			Water Used Gal. per Hr.	Temperature Deg. F.		Barometer Inches of Mercury
		Gal. per Hr.	Hp.-hr. per Gal.	Lb.-per Hp.-hr.		Cool- ing Medium	Air	

TEST B - 100% MAXIMUM LOAD - TWO HOURS

46.46	1400	3.917	11.86	0.514	0.000	192	76	28.975
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TEST C - OPERATING MAXIMUM LOAD - ONE HOUR

46.03	1400	3.846	11.97	0.510	0.000	191	79	28.940
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\* TEST D - ONE HOUR

41.49	1400	3.611	11.49	0.531	0.000	197	81	28.920
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TEST E - VARYING LOAD - TWO HOURS (20 minute runs; last line average)

41.40	1399	3.600	11.50	0.530	- - -	198	83	- - -
1.22	1520	1.697	0.72	8.484	- - -	197	83	- - -
21.95	1476	2.780	7.90	0.768	- - -	197	83	- - -
44.75	1367	3.733	11.99	0.509	- - -	194	85	- - -
11.11	1502	2.203	5.04	1.210	- - -	195	84	- - -
31.90	1438	3.172	10.06	0.607	- - -	195	84	- - -
25.39	1450	2.861	8.87	0.687	0.000	196	84	28.890

D R A W B A R H O R S E P O W E R T E S T S

Hp.	Draw- bar Pull Lbs.	Speed Miles per Hr.	Crank- shaft Speed R.P.M.	Slip of Drive Wheels %	Fuel Consumption			Water Used Gal. per Hr.	Temp. Deg. F.		Barometer Inches of Mercury
					Gal. per Hr.	Hp.-hr. per Gal.	Lb. per Hp.-hr.		Cool- ing Med.	Air	

TEST F - 100% MAXIMUM LOAD - Second GEAR

40.59	7091	2.15	1403	2.69	-----	Not Recorded	-----	183	85	28.930
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TEST G - OPERATING MAXIMUM LOAD

39.11	9868	1.49	1405	4.67	-----	Not Recorded	-----	183	86	28.920
39.48	6904	2.14	1400	2.55	"	"	"	184	83	28.930
38.62	4556	3.18	1402	1.52	"	"	"	187	82	28.985
37.35	3650	3.84	1403	1.22	"	"	"	188	81	28.985
34.15	2434	5.26	1403	0.75	"	"	"	188	78	28.985

\* TEST H - TEN HOURS - Second GEAR

32.29	5677	2.13	1400	3.03	3.547	9.10	0.670	0.000	194	83	28.950
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\* Formerly called RATED LOAD; see REMARKS 4, page 3.

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FUEL, OIL and TIME

Fuel Gasoline Octane 73 Weight per gallon 6.10 pounds  
 Oil: S.A.E. No. 20 To motor 3.454 gal. Drained from motor 1.924 gal.  
 Total time motor was operated 49 hours

BRIEF SPECIFICATIONS

Advertised speeds, miles per hour: First 1 1/2 Second 2 1/4  
 Third 3 1/4 Fourth 3 7/8 Fifth 5 1/4 Reverse 1 3/4  
 Belt pulley: Diam. 11.313" Face 9" R.P.M. 878 Belt speed 2600 f.p.m.  
 Clutch: Make Rockford Type Single plate, dry disc Operated by Hand  
 Seat Upholstered  
 Total weight as tested (with operator) 10,830 pounds

MOTOR

Make Own Serial No. TCBM517-T1 Type 4 cylinder, vertical  
 Head I Mounting Crankshaft lengthwise Lubrication Pressure  
 Bore and stroke 4.4" x 5.5" Rated R.P.M. 1400  
 Port diameter valves: Inlet 1.875" Exhaust 1.688"  
 Magneto: Make Own Model H-4  
 Carburetor: Make Own Model E-13 Size 1 3/8"  
 Governor: Make Own Type Variable speed, centrifugal  
 Air Cleaner: Make Donaldson Type Oil-washed wire screen filter  
 Oil Filter: Make Motor Improvements, Inc. Type Partial flow with re-  
placeable bakelite impregnated paper element  
 Cooling medium temperature control: Bishop and Babcock thermostat and  
Defiance radiator shutters

CHASSIS

Type Tracklayer Serial No. 2413T7 Drive Enclosed gear  
 Tread width: 60" (wide tread) Measured length of track 17.9053'  
 Cleats: Type Integral with shoes No. per track 33  
 Size 2 1/8" high x 20" long (clipped corners)

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REPAIRS AND ADJUSTMENTS

Before the start of rated load drawbar test, a belt which was missing from one of the track shoes, was replaced by a new one.

REMARKS

1. All results shown on page 1 of this report were determined from observed data and without allowances, additions or deductions. Tests B and F were made with carburetor set for 100% maximum belt horsepower and data from these tests were used in determining the horsepower to be developed in tests D and H, respectively. Tests C, D, E, G and H were made with an operating setting of the carburetor (selected by the manufacturer) of 99.5% of maximum belt horsepower.

	<u>DRAWBAR</u>	<u>BELT</u>
2. Observed maximum horsepower (tests F & B)	40.59	46.46
3. "Sea level (calculated) maximum horsepower (based on 60° F, and 29.92" Hg)	42.98	48.69
4. "Seventy-five per cent of calculated maximum drawbar horsepower and eighty-five per cent of calculated maximum belt horsepower (formerly A.S.A.E. and S.A.E. ratings)	32.24	41.39

We, the undersigned, certify that the above is a true and correct report of official tractor test No. 372.

Carlton L. Zink  
 Engineer-in-charge

E. E. Brackett

C. W. Smith

L. W. Hurlbut  
 Board of Tractor Test Engineers